

Zoomorphology

An International
Journal of Comparative and
Functional Morphology

Volume 105, 1985

Editors

- P. Ax** II. Zoologisches Institut und Museum der Universität, Berliner Str. 28,
D-3400 Göttingen, Federal Republic of Germany
- W. Bock** Department of Biological Sciences, Columbia University,
New York, NY 10027, USA
- R.B. Clark** Department of Zoology, The University,
Newcastle upon Tyne NE1 7RU, Great Britain
- C.O. Hermans** Department of Biology, Sonoma State University,
Rohnert Park, CA 94928, USA
- O. Kraus** (Managing Editor)
Zoologisches Institut und Zoologisches Museum der Universität,
Martin-Luther-King-Platz 3,
D-2000 Hamburg 13, Federal Republic of Germany
- N.P. Kristensen** Department of Entomology, Zoological Museum,
University of Copenhagen, Universitetsparken 15,
Copenhagen K, Denmark
- G. Kümmel** Zoologisches Institut der Universität,
Kornblumenstr. 13, Postfach 6380,
D-7500 Karlsruhe 1, Federal Republic of Germany
- R.M. Rieger** Institut für Zoologie der Universität, Universitätsstr. 4,
A-6020 Innsbruck, Austria
- V. Ziswiler** Zoologisches Museum, Universität Zürich-Irchel,
Winterthurerstr. 190,
CH-8057 Zürich, Switzerland



Springer International

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA: Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. This fee is US \$ 0.20 per page, or a minimum of US \$ 1.00 if an article contains fewer than five pages. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0720-213X, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Other regulations: Authors publishing in this journal can, under certain conditions, benefit from library and photocopy fees collected by VG WORT. Authors of German nationality and those resident in the Federal Republic of Germany or Berlin (West), as well as citizens of Austria, Switzerland and member countries of the European Community, may apply to Verwertungsgesellschaft WORT, Abteilung Wissenschaft, Goethestraße 49, D-8000 München 2, for detailed information.

Printers: Universitätsdruckerei H. Stürtz, AG, Würzburg

© Springer-Verlag Berlin Heidelberg 1985
Springer-Verlag GmbH & Co KG
1000 Berlin 33
Printed in Germany



Springer International

Contents

| | |
|--|----------|
| Reismeyer, F.: Embryonic development and molting of the antennal coeloconic no pore- and double-walled wall pore sensilla in <i>Locusta migratoria</i> (Insecta, Orthopteroidea) | 356 |
| Baucher, M.F., s. Jouin, C., et al. | 76 |
| Reiser, A., Peters, W.: Fine structure of the midgut gland of <i>Phalangium opilio</i> (Chelicerata, Phalangida) | 317 |
| Reiser, A., Peters, W.: The ultrastructure of the midgut and the formation of peritrophic membranes in a harvestman, <i>Phalangium opilio</i> (Chelicerata Phalangida) | 326 |
| Reiser, H., Honomichl, K.: Ultrastructure of a muscle spindle-analogous receptor organ in the mandible of <i>Oncopectus fasciatus</i> (Insecta, Heteroptera) with remarks on the homology of the mandibular muscles | 388 |
| Reisemann, J.: Ultrastruktur und Bildungsweise penialer Hartstrukturen bei freilebenden Plathelminthen | 143 |
| Reise, J.F., s. Hiller-Adams, P. | 108 |
| Reise, R., Tolloczko, B.: Secretory glands of the snail tentacle and their relation to the olfactory organ (Mollusca, Gastropoda) | 60 |
| Reiser, A., s. de Buffrénil, V., et al. | 336 |
| Reisner, V., Collet, A., Pascal, M.: Ontogenetic development of skeletal weight in a small delphinid, <i>Delphinus delphis</i> (Cetacea, Odontoceti) | 336 |
| Reise, W.S., s. Guillet, A., et al. | 51 |
| Reise, W., s. Seyfarth, E.-A., et al. | 190 |
| Reise, G.C.A., Koomen, P.: A biomechanical analysis of spitting in archer fishes (Pisces, Perciformes, Toxidae) | 240 |
| Reise, D.O.: Fine structure of <i>Lasaea subviridis</i> and <i>Mysella tumida</i> sperm (Bivalvia, Galeommatacea) | 125 |
| Reisen, A., Woodwick, H., Sensenbaugh, T.: Spermiogenesis and ultrastructure of spermatozoa in <i>Saxipendium coronatum</i> (Hemichordata, Enteropneusta) with consideration of their relation to reproduction and dispersal | 302 |
| Reise, P.R., s. Rohde, K. | 30, 34 |
| Reise, A.S., Gaunt, S.L.L.: Electromyographic studies of the syrinx in parrots (Aves, Psittacidae) | 1 |
| Reise, S.L.L., s. Gaunt, A.S. | 1 |
| Reise, O.: Structure and position of bacterial endosymbionts in the gill filaments of Lucinidae from Bermuda (Mollusca, Bivalvia) | 296 |
| Reise, J.C., Holland, N.D., Hayami, I.: Fine structure of the stalk of an isocrinid sea lily (<i>Metacrinus rotundus</i>) (Echinodermata, Crinoidea) | 39 |
| Reise, A., Doyle, W.S., Rüther, H.: The combination of photogrammetry and finite elements for a fine grained functional analysis of anatomical structures | 51 |
| Reise, K., s. Seyfarth, E.-A., et al. | 190 |
| Reise, I., s. Grimmer, J.C., et al. | 39 |
| Reise-Adams, P., Case, J.F.: Optical parameters of the eyes of some benthic decapods as a function of habitat depth (Crustacea, Decapoda) | 108 |
| Reise, N.D., s. Grimmer, J.C., et al. | 39 |
| Reise, H.: Die Cheliceren der Araneae, Amblypygi und Uropygi mit den Skleriten, den Plagulae (Chelicerata, Arachnomorpha) | 69 |
| Reise, K., s. Bolender, H. | 388 |
| Reise, C., Tchernigovtzeff, C., Baucher, M.F., Toulmond, A.: Fine structure of probable mechano- and chemoreceptors in the caudal epidermis of the lugworm <i>Arenicola marina</i> (Annelida, Polychaeta) | 76 |
| Reise, G.: Ultrastructure and adaptation in the retina of <i>Agais urticae</i> (Lepidoptera) | 90 |
| Reise, P., s. Elshoud, G.C.A. | 240 |
| Lammert, V.: The fine structure of protonephridia in Gnathostomulida and their comparison within Bilateria | 308 |
| Langenbruch, P.-F., Simpson, T.L., Scalera-Liaci, L.: Body structure of marine sponges. III. The structure of choanocyte chambers in <i>Petrosia ficiformis</i> (Porifera, Demospongiae) | 383 |
| Langenbruch, P.-F., s. Weissenfels, N. | 12 |
| Langenbruch, P.-F., s. Simpson, T.L., et al. | 375 |
| Liebermann, H., s. Schipp, R., et al. | 16 |
| Magnier, Y., s. Schipp, R., et al. | 16 |
| Märkel, K., Röser, U.: Comparative morphology of echinoderm calcified tissues: Histology and ultrastructure of ophiuroid scales (Echinodermata, Ophiuroida) | 197 |
| Martin, A.W., s. Schipp, R., et al. | 16 |
| Pascal, M., s. de Buffrénil, V., et al. | 336 |
| Peters, W., s. Becker, A. | 317, 326 |
| Pietsch, A., Westheide, W.: Ultrastructural investigations of presumed photoreceptors as a means of discrimination and identification of closely related species of the genus <i>Microphthalmus</i> (Polychaeta, Hesionidae) | 265 |
| Purschke, G.: Anatomy and ultrastructure of ventral pharyngeal organs and their phylogenetic importance in Polychaeta (Annelida). I. The pharynx of the Dinophilidae | 223 |
| Reed, C.G., s. Stricker, S.A. | 253 |
| Rehkämper, G., Welsch, U.: On the fine structure of the cerebral ganglion of <i>Sagitta</i> (Chaetognatha) | 83 |
| Rohde, K., Garlick, P.R.: Two ciliate sense receptors in the larva of <i>Austramphilinea elongata</i> Johnston, 1931 (Amphiliinea) | 30 |
| Rohde, K., Garlick, P.R.: Subsurface sense receptors in the larva of <i>Austramphilinea elongata</i> Johnston, 1931 (Amphiliinea) | 34 |
| Röser, U., s. Märkel, K. | 197 |
| Rüther, H., s. Guillet, A., et al. | 51 |
| Saller, U., Weissenfels, N.: The development of <i>Spongilla lacustris</i> from the oocyte to the free larva (Porifera, Spongilidae) | 367 |
| Scalera-Liaci, L., s. Simpson, T.L., et al. | 375 |
| Scalera-Liaci, L., s. Langenbruch, P.-F., et al. | 383 |
| Schipp, R., Martin, A.W., Liebermann, H., Magnier, Y.: Cytomorphology and function of the pericardial appendages of <i>Nautilus</i> (Cephalopoda, Tetrabranchiata) | 16 |
| Seifert, P., Wunderer, H., Smola, U.: Regional differences in a nematoceran retina (Insecta, Diptera) | 99 |
| Sensenbaugh, T., s. Franzén, Å., et al. | 302 |
| Seyfarth, E.-A., Eckweiler, W., Hammer, K.: Proprioceptors and sensory nerves in the legs of a spider, <i>Cupiennius salei</i> (Arachnida, Araneida) | 190 |
| Simpson, T.L., Langenbruch, P.-F., Scalera-Liaci, L.: Silica spicules and axial filaments of the marine sponge <i>Stelletta grubii</i> (Porifera, Demospongiae) | 375 |
| Simpson, T.L., s. Langenbruch, P.-F., et al. | 383 |
| Smola, U., s. Seifert, P., et al. | 99 |
| Sreng, L.: Ultrastructure of the glands producing sex pheromones of the male <i>Nauphoeta cinerea</i> (Insecta, Dictyoptera) | 133 |
| Stricker, S.A.: The ultrastructure and formation of the calcareous ossicles in the body wall of the sea cucumber <i>Leptosynapta clarki</i> (Echinodermata, Holothuroidea) | 209 |
| Stricker, S.A., Reed, C.G.: Development of the pedicle in the articulate brachiopod <i>Terebratalia transversa</i> (Brachiopoda, Terebratulida) | 253 |
| Tchernigovtzeff, C., s. Jouin, C., et al. | 76 |

| | | | |
|--|-----|--|---|
| Telford, M.: Domes, arches and urchins: The skeletal architecture of echinoids (Echinodermata) | 114 | locomotion (Gastropoda, Buccinacea) | 3 |
| Tolloczko, B., s. Chase, R. | 60 | Wake, M.H.: The comparative morphology and evolution of the eyes of caecilians (Amphibia, Gymnophiona) . . . | 2 |
| Toulmond, A., s. Jouin, C., et al. | 76 | Weissenfels, N., Langenbruch, P.-F.: Langzeitkulturen von Süßwasserschwämmen (Porifera, Spongillidae) unter Laborbedingungen | 3 |
| Verni, F.: <i>Litonotus</i> – <i>Euplotes</i> (predator-prey) interaction: ciliary structure modifications of the prey caused by toxicysts of the predator (Protozoa, Ciliata) | 333 | Weissenfels, N., s. Saller, U. | 3 |
| Viertel, B.: The filter apparatus of <i>Rana temporaria</i> and <i>Bufo bufo</i> larvae (Amphibia, Anura) | 345 | Welsch, U., s. Rehkämper, G. | 2 |
| Voltzow, J.: Morphology of the pedal circulatory system of the marine gastropod <i>Busycon contrarium</i> and its role in | | Westheide, W., s. Pietsch, A. | 3 |
| | | Woodwick, H., s. Franzén, Å., et al. | |
| | | Wunderer, H., s. Seifert, P., et al. | |